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Identification of 22 Grasses Common in South Dakota

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Identification of 22 Grasses Common in South Dakota



**Cooperative Extension Service
U. S. Department of Agriculture
South Dakota State University**

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Identification of 22 Grasses Common in South Dakota

FS 600

by Charles M. Schumacher, range conservationist, Soil Conservation Service, and Lyle A. Derscheid, Extension agronomist

Grassland, making up more than 50 percent of the land area in South Dakota, is one of the most important agricultural resources in the state. In addition to providing feed for livestock, grass is unexcelled for holding soils in place. It provides habitat for many kinds of wildlife and, when well managed, adds to the beauty of the countryside. By proper use the value of grassland can be greatly increased.

Before applying principles of grassland management, it is necessary to know the kinds of grasses. This fact sheet identifies some grasses common in South Dakota.

The line drawings of seed heads were taken from SCS Agriculture Handbook 339 and SCS-TP-151, "Key to the Native Perennial Grasses." Drawings of leaf characters are taken from "Grasses of Common Usage and Occurrence in North Dakota Agriculture—Guide to Identification by Leaf Characters."

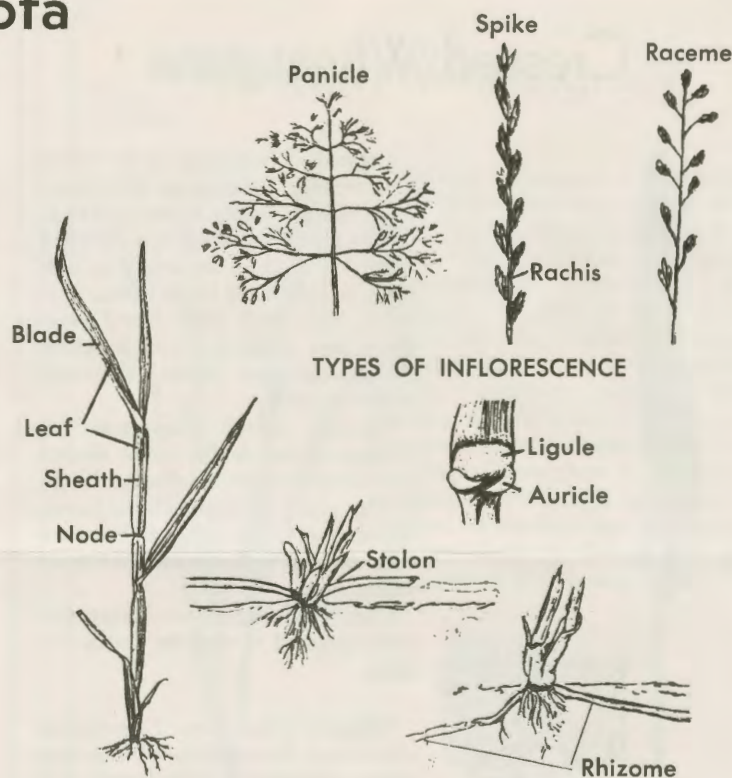
Fact Sheets for Additional Information

FS 546, Cool-Season Grasses for Early Spring and Fall

FS 547, Cool-Season Grasses for May and June

FS 548, Warm-Season Grasses for July and August

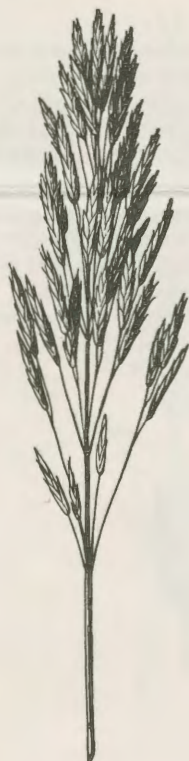
FS 549, Grasses for Special Purposes



Parts of Grass Plant

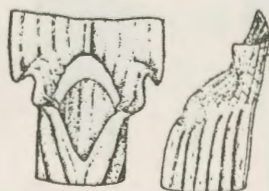
INTRODUCED COOL-SEASON GRASSES

Smooth Bromegrass

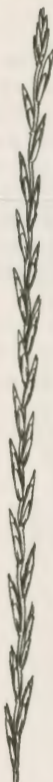


Smooth bromegrass (*Bromus inermis*). Sod former from creeping rhizomes, introduced from Europe. Plant is 2 to 3½ feet tall; seed head is a panicle 4 to 8 inches long that matures in July. Leaf sheath is closed, forming a tube around the stem (very unusual in grasses). Leaf blade is smooth and flat, ¼ to ⅜ inches wide, with a characteristic "W" mark about halfway down. Auricles are absent and ligule is 1/16 inch long.

Smooth bromegrass is the principal cultivated grass in eastern South Dakota and is common in road ditches and odd areas in this part of the state.



Intermediate Wheatgrass



Intermediate wheatgrass (*Agropyron intermedium*). Sod former from short rhizomes, introduced from Russia. Plant is 2½ to 4 feet tall; seed head is a spike 4 to 8 inches long that matures in August. Leaf blade is flat and veined, broad at the base and tapered to a point. Auricles are of medium length and clasping. Ligule is short.

Intermediate wheatgrass is frequently planted for pasture or hay in the central and eastern part of South Dakota. It has seldom spread to unplanted areas.



INTRODUCED COOL-SEASON GRASSES

Crested Wheatgrass



Crested wheatgrass (*Agropyron desertorum*). Bunchgrass introduced from eastern Russia. Plant is 18 to 30 inches tall; seed head is a flattened spike $1\frac{1}{2}$ to 3 inches long that matures in July. Leaf blade is flat, $\frac{1}{10}$ to $\frac{1}{8}$ inch wide with raised veins above and prominent midrib below. Auricles are short. Ligule is short and membranous.

Fairway crested wheatgrass (*A. cristatum*) has smaller seeds, shorter and broader heads, smaller seedlings, shorter plants with more basal leaves, less tendency to bunch, and less summer dormancy than standard crested wheatgrass.

Crested wheatgrass has been extensively planted in western South Dakota.



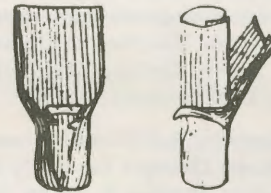
Siberian wheatgrass (*Agropyron sibiricum*). Bunchgrass, fibrous root system, introduced from Russia. It is very similar to crested wheatgrass, but has narrower and awnless heads, finer stems, and leaves are more lax.

Tall Wheatgrass



Tall wheatgrass (*Agropyron elongatum*). Bunchgrass introduced from Russia. Plant is $2\frac{1}{2}$ to 5 feet tall; seed head is a spike 6 to 10 inches long that matures in August. Leaf blade is flat, coarse, and deeply ridged on the upper surface. Auricles are of medium length. Ligule is very short.

Tall wheatgrass is well adapted to saline and alkali soils.

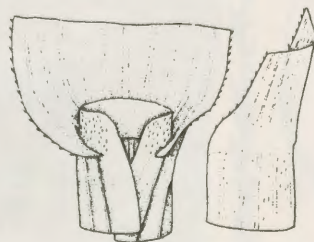


Kentucky Bluegrass



Kentucky bluegrass (*Poa pratensis*). Sod former from short rhizomes, introduced from Europe. Plant is 8 to 24 inches tall; seed head is an open pyramid shaped panicle that matures in June. Leaf blade is flat or folded, 4 to 8 inches long and $\frac{1}{8}$ inch wide, and is distinctly boat shaped at the tip. Auricles are absent; ligule is very short and collar shaped.

Kentucky bluegrass is used extensively as a lawn grass and is the principal grass in many eastern South Dakota pastures.

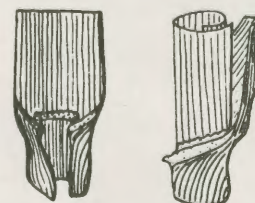


Russian Wildrye



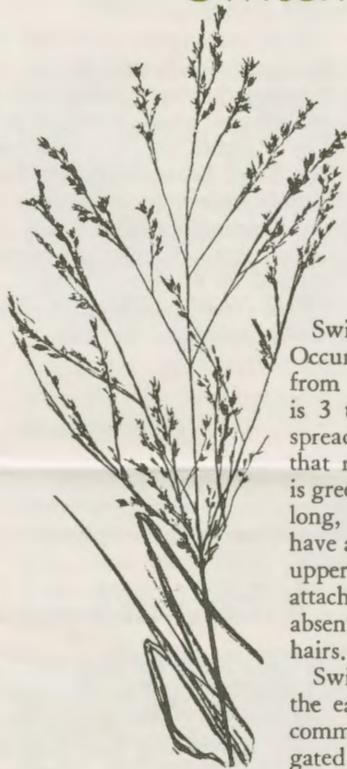
Russian wildrye (*Elymus junceus*). Bunchgrass introduced from Russia. Plant is 2 to $3\frac{1}{2}$ feet tall; seed head is an erect, compact spike that matures in July. Leaves are soft and lax, mostly basal. Leaf blade is strongly nerved, 6 to 12 inches long and up to $\frac{1}{4}$ inch wide. Auricles are prominent and clasping. Ligules are short and membranous.

Russian wildrye has not been used extensively in South Dakota.



NATIVE WARM-SEASON GRASSES

Switchgrass



Switchgrass (*Panicum virgatum*). Occurs in large bunches or dense sod from coarse, scaly rhizomes. Plant is 3 to 6 feet tall; seed head is a spreading panicle 6 to 12 inches long that matures in September. Foliage is green or bluegreen. Leaf blades are long, flat, tapering to sharp tip and have a V-shaped patch of hair on the upper surface of the blade where it attaches to the sheath. Auricles are absent. Ligule is a fringe of short hairs.

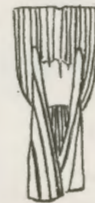
Switchgrass occurs on uplands in the eastern part of the state and is common on overflow and subirrigated sites over most of South Dakota.

Indiangrass

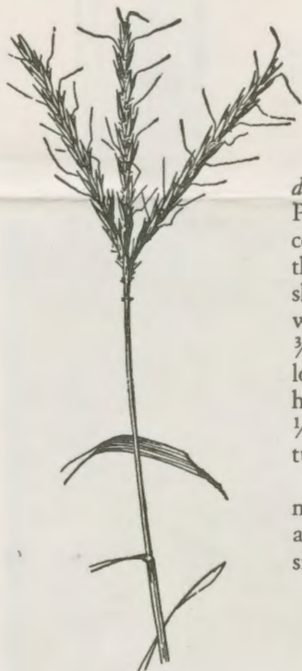


Indiangrass (*Sorghastrum nutans*). Sod former from short rhizomes, 4 to 7 feet tall; seed head is a dense golden panicle 4 to 8 inches long that matures in September. Foliage is light green. Leaf blade is flat, 6 to 20 inches long, $\frac{1}{4}$ to $\frac{3}{8}$ inch wide but tapered to a narrow base where it joins the sheath. Auricles are absent. Ligule is $\frac{1}{8}$ inch long and divided like a claw hammer.

Indiangrass occurs on uplands in the eastern part of the state and is common on subirrigated and overflow sites in the central and eastern part of South Dakota.

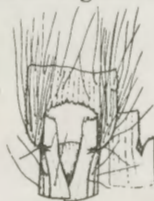


Big Bluestem



Big bluestem (*Andropogon gerardi*). Sod former from short rhizomes. Plant is 3 to 6 feet tall; seed head consists of three connected racemes that mature in late September. Leaf sheaths are usually hairy and somewhat flattened. Leaf blade is $\frac{1}{4}$ to $\frac{3}{8}$ inch wide, flat or V-shaped, and lower leaves are covered with silky hairs. Auricles are absent. Ligule is $\frac{1}{8}$ inch long and membranous. Plants turn red to purple in the fall.

Big bluestem is often a dominant native grass in eastern South Dakota and on overflow and subirrigated sites throughout the state.

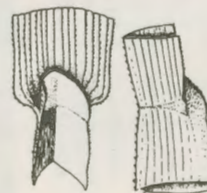


Little Bluestem



Little bluestem (*Andropogon scoparius*). Bunchgrass, 1 to 4 feet tall; seed head consists of several racemes that mature in late September. Lower stem and leaf sheath are flattened, and sheath is not hairy. Leaf blade is $\frac{1}{8}$ to $\frac{1}{4}$ inch wide, up to 10 inches long, and flat or V-shaped at base. Auricles are absent. Ligule is $\frac{1}{16}$ inch long and membranous.

Little bluestem is a dominant native grass on uplands in eastern South Dakota and on sandy and shallow sites throughout the state.



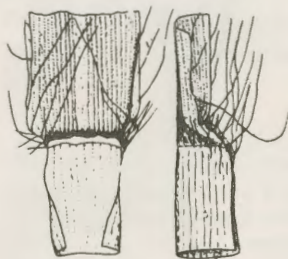
NATIVE WARM-SEASON GRASSES

Sideoats Grama

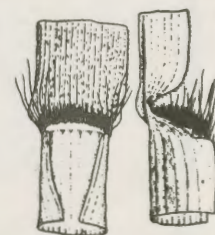
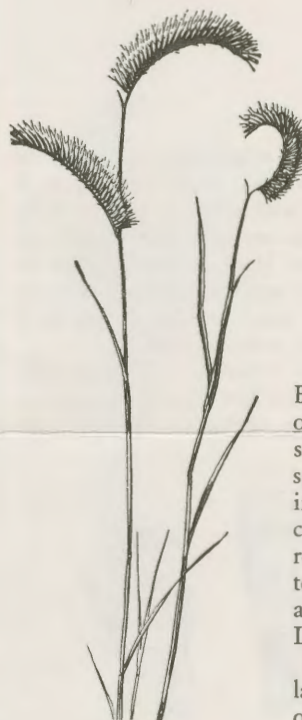


Sideoats grama (*Bouteloua curtipendula*). Sod former from short, scaly rhizomes. Plant is 1 to 2 feet tall; seed head consists of 35 to 50 spikes twisted to one side of a long, slender axis. Seed matures in September. At maturity basal leaves curl and turn white. Sheath is round, veined, with a few scattered hairs. Leaf blades are $\frac{1}{8}$ inch wide, flat, and have glandular hairs along the edges. Auricles are absent. Ligules are short and membranous.

Sideoats grama occurs throughout South Dakota and is especially prevalent on shallow sites.



Blue Grama



Blue grama (*Bouteloua gracilis*). Bunchgrass that tillers to form an open sod. Plant is 6 to 20 inches tall; seed head is a one sided, sickle shaped spike up to 2 inches long that matures in August. Foliage is grayish-green, curling at maturity. Sheaths are round and smooth. Leaf blades are 1 to 6 inches long, flat, usually smooth and free of hairs. Auricles are absent. Ligule is a fringe of very short hairs.

Blue grama is abundant on uplands in the western and central part of the state.

Buffalograss



Buffalograss (*Buchloe dactyloides*). Sod former from above-ground stolons that take root at nodes. Plant is a low growing mat of curly blades only 2 to 4 inches tall. Individual plants are either male or female. On male plants florets are on a short, one sided spike on a stem up to 8 inches tall. Seeds on the female plant are in a small, hard bur that matures in August. Foliage is gray-green or yellowish-green. Leaf blades are about $\frac{1}{16}$ inch wide and hairy on both sides and edges. Auricles are absent. Ligule is a fringe of short hairs.

Buffalograss occurs on heavy upland soils in the western and central part of South Dakota.

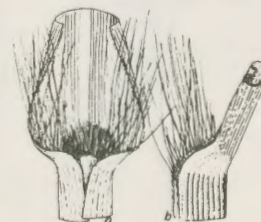


Prairie Sandreed



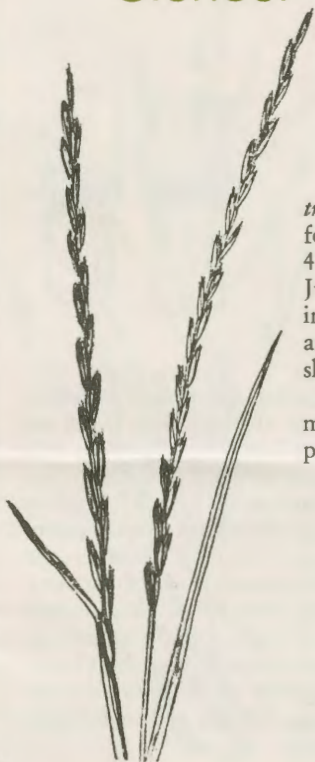
Prairie sandreed (*Calamovilfa longifolia*). Loose sod former from long, scaly rhizomes. Plant is 2 to 5 feet tall; seed head is a panicle 6 to 12 inches long that matures in late September. Foliage is light green, straw colored after it matures. Leaf blade is 4 to 20 inches long, flat to rolled, smooth, $\frac{1}{8}$ to $\frac{1}{2}$ inch wide, tapering to a long, fine point. Auricles are absent. Ligule is a fringe of short hairs.

Prairie sandreed is often the dominant grass on the Sands range site.



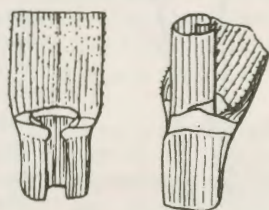
NATIVE COOL-SEASON GRASSES

Slender Wheatgrass



Slender wheatgrass (*Agropyron trachycaulum*). Bunchgrass, 2 to 4 feet tall; seed head is a slender spike 4 to 10 inches long that matures in July. Leaf blade is flat, $\frac{1}{16}$ to $\frac{1}{8}$ inch wide and without hair. Auricles are very small or absent. Ligule is short and collar shaped.

Slender wheatgrass is most common on overflow sites in the western part of the state.



Western Wheatgrass



Western wheatgrass (*Agropyron smithii*). Erect sod former from very long, creeping rhizomes. Plant is 1 to 2 feet tall; seed head is a spike 3 to 6 inches long that matures in July. Foliage is bluegreen in color. Leaf blade is stiff, flat, tapered to a sharp point and deeply ridged on the upper surface. Auricles are fairly long and clasping. Ligule is very short, membranous and collar shaped.

Western wheatgrass is abundant on upland sites in high range condition and on overflow sites in western and central South Dakota and on heavy soils in the eastern part of the state.

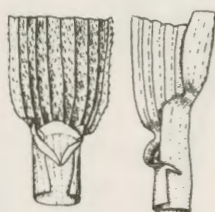


Canada Wildrye



Canada wildrye (*Elymus canadensis*). Bunchgrass, 2 to 5 feet tall; seed head is a nodding spike 3 to 8 inches long that matures in July. Foliage is dark green. Leaf blades are flat, wide, finely toothed on margin. Auricles are $\frac{1}{16}$ inch long and clasping. Ligule is short and collar shaped.

Canada wildrye is best suited to those sandy or loamy soils where moisture conditions are favorable.



Porcupinegrass



Porcupinegrass (*Stipa spartea*). Bunchgrass, $1\frac{1}{2}$ to $3\frac{1}{2}$ feet tall; seed head is a narrow panicle 6 to 8 inches long that matures in late June. The awn on the sharp pointed seed is up to 8 inches long. Leaf blades are $\frac{1}{16}$ to $\frac{1}{4}$ inch wide and up to 16 inches long, flat or rolled, tapering to a long fine point, and ridged on the upper surface. Auricles are absent. Ligules are prominent, membranous, $\frac{1}{8}$ to $\frac{1}{4}$ inch long.

Porcupinegrass is common on sandy and silty upland soils in eastern South Dakota.



NATIVE COOL-SEASON GRASSES

Green Needlegrass



Green needlegrass (*Stipa viridula*). Bunchgrass, 1½ to 3 feet tall; seed head is a narrow panicle 4 to 8 inches long that matures in late June. Foliage is green to dark green. Leaf blades are 4 to 12 inches long, narrow, rolled or flat, without hairs but with prominent veins above. Auricles are absent. Ligule is short, membranous and collar shaped.

Green needlegrass is common on deep, fine textured soils.

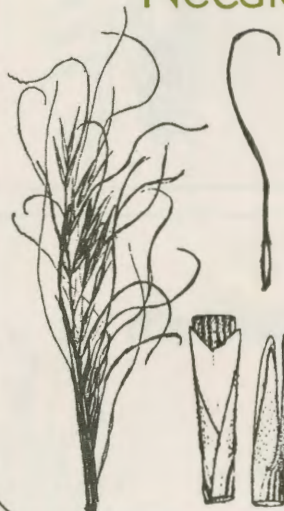
Reed Canarygrass



Reed canarygrass (*Phalaris arundinacea*). Coarse sod former from creeping rhizomes. Plant is 2 to 5 feet tall; seed head is a narrow panicle 3 to 7 inches long that matures in late June. Leaf blades are flat or slightly keeled, ¼ to ½ inch wide with prominent midrib below. Auricles are absent. Ligules are membranous and up to ¼ inch long.

Reed canarygrass is adapted to wet lands throughout the state.

Needleandthread



Needleandthread (*Stipa comata*). Bunchgrass, 1 to 2 feet tall; seed head is a narrow panicle 4 to 8 inches long that matures in late June. The awn on the sharp pointed seed is up to 6 inches long. Foliage is dull green in color. Leaf blades are ⅛ to ¾ inch wide, up to 12 inches long, flat or rolled, ridged and rough on the upper surface. Auricles are absent. Ligules are prominent, membranous, ⅛ inch long.

Needleandthread is common on sandy and silty sites in central and western South Dakota.

Prairie Junegrass



Prairie junegrass (*Koeleria cristata*). Bunchgrass, 8 to 24 inches tall; seed head is a very narrow panicle 1 to 5 inches long that matures in June. Leaf blades are narrow, 1½ to 5 inches long, flat or rolled, a rough above from raised veins. Auricles are absent. Ligules are short, membranous and collar shaped.

Prairie junegrass occurs as scattered plants on uplands throughout the state.

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